

Trends and Challenges in Nigerian Extension Education and Research

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Abstract

Research in extension education is a serious and challenging task facing Nigeria today because of new trends that keeps on emerging continuously. This paper seeks to examine some of the common research techniques used in extension education and describe their applicability and workability in helping people to help themselves. Most of the researches in this area are more theoretical than the practical nature of the actual extension practice. The general aim of the paper is to identify the emerging trends and how these trends pose additional challenges to extension research and practice. Two major research approaches, Participatory Action Research in Extension (PARE) and Community Based Research (CBR) were found to be encouraging community members to make good decisions on what they feel is better for their lives. This implies that the methods are very useful, relevant and can considerably increase the community effectiveness with enduring by the researchers' to employ them despite their long-time requirements

Keywords: extension education, trends, challenges.

Introduction

Successful extension education program and research begins with the notion that the concern farmers or community members have to be consulted, informed and formally invited to participate in some actions that will change their lives for the better. Also, sustainability paradigms needs to be critically explained to them in such a way that the extension system can sustain the programs of action even when the external funding stops, by identifying local resources as substitute. In any community development efforts especially in the rural communities where majority are poor (Shitu, 2012), fundamental rights of the populace needs to be given priority and also, the basic principles of democracy, that uphold justice, equity and fairness, from the initiation of the program or project to the end cycle of it. People were found to be very much interested in ensuring that their community has improved internally and externally (Armstrong, 2006). Moreover, extension education was alleged to be more of theory than practical as it was used to be (Anyanwu, 1998) and the programs are faced with the challenges associated with high inconsistencies. This also explains why the concept is intentionally or unintentionally used to mean or mistaken as community development. Moreover, FAO, (2006) argue that any rural development appraisal that does not uphold the interest, needs and aspirations of community members in earnest, then outcome has to be questioned and re-evaluated. Community members were found to be very much interested in participating and willing to volunteer in cash and in kind if they are given opportunity to improve their communities based on their interest (Armstrong, 2006).

Moreover, extension research is time consuming and energy demanding from the side of the researcher (Dukku, 2010), this may be the reason behind much resistance from the academics to take up the challenge of finding the real problem and prospering possible solutions, which may be a reason behind operating the extension work more theoretically than in practical terms. Nevertheless, the extension program was found to have solved many rural problems such as literacy level, agricultural production, health issues and other social issues that will reduce extreme poverty in general (Anyanwu, 1998).

In addition, long usage of extension practice has shown tremendous and remarkable achievement in improving community relations, cohesion and understanding. The processes empowers the community members through the enlightenment and awareness creation mechanisms, to ensure that the potentials within the participants, clients or participants, especially vulnerable and women that are mostly excluded due to cultural taboos; it promotes collective bargaining and solidarity; it promotes volunteerism spirit and local resource mobilization for community improvements; it critically measures and evaluate human needs economically and socially, thereby giving the voiceless in the community a voice of challenging objectively the structures of power

and influence community decisions. Furthermore, extension work in rural communities facilitates the creation of social capital; initiate formation of functional groups and form synergy with the existing already found in the communities, these actions, interestingly, promotes community action, participation, partnership and felicitation, which in the long run facilitate and maintain peace and stability of the communities for any development effort to take place.

In recognition of the aforementioned, international donor agencies use the principles of social capital through community driven development (CDD), to ensure sustainable development in the rural communities by applying researches related to poverty reduction such as extreme poverty and hunger; mortality rate; and long-term environmental sustainability (IFAD, 2011 Josephine, Christiana, & Ganiyu, 2011; FAO, 1994). This clearly points out that, extension research in the field of academics and practice can be seen as forum which provides a discourse and debates on the how best marginalized individuals and communities can be encouraged to participate actively in decision making, resource mobilization and management and ensuring equity, through collective action and recognition of the principles that community belongs to all and every member has a stake towards ensuring it becomes a better place now and in the future (Bichi, 2010).

Purpose and Objectives

The main purposes of this concept paper are of two dimensions. Firstly, the paper tries to identify trends and possible challenges of extension education research. Secondly, the paper identified and discusses common research approaches in extension work and their influences on extension theory and practice.

Methodology

The paper mainly uses secondary data comprising of journals, books, and even government documented reports of government were consulted as the basis of literature review. Moreover, personal experiences of the writers and some informal discussions with extension personnel were presented. All these were put in place to explore and create holistic awareness on extension research paradigm and challenges faced by the researchers in the field.

Conceptual Clarification

According to Bichi (2010) there are four (4) interrelated fields sharing same boundary with extension education and having similar objectives, goals, processes, design, implementation and outcomes; namely community development, community education, community organizing, and community resource management.

Community development:- is a process that deals with improving the capacity and potentiality of the immediate environment using available local human and material resources. The processes mainly starts with community need assessment to translating the ideas into action, and in the long run evaluating the actions and bearing the consequences with possible adjustment to ensure the community become better than it was. In addition, it is concern about the social, economic, political and psychological wellbeing of all the community members (Bashir, 2014; Ndaejji, 2012).

Community education:- this is similar to what other scholars viewed as community conscientization (Bichi, 2010). It has to do with increasing the capacity and capability of community members' knowledge, skills and attitudes. It deals with the individual differences existing within the community members and their groups. Moreover, community education is conducted in three different but interrelated phases; it starts with changing the mind set of community members to make them build the habit of seeking for knowledge and other empowerment processes to help them value the resources in the community. Secondly, the community members have to also have a first-hand information about the existence of the two 'worlds', they one they are in and the one that they are not in, and also the differences that exist between them, this phase also give them a highlight on how to maintain good relationships and prevent themselves from all external oppressions. Thirdly, this phase enable them utilize all they acquire in the aforementioned phases and be able to implement and change their way of living, it involves activities like management, mobilizing, planning, communication and human relation.

Community organizing:- this aspect refers to process of bringing people with different background within the same locality to struggle for community needs and aspirations. Community organizing is a process that involves so many activities, ranging from educating, incorporation, social exploration, problem spotting, grassroots' activities, consultation, dramatizing, recruitment, assessment, reproduction, participation, partnership, felicitation and setting up of the self-help group (Osborne, 2000; Ibarra & Hunter, 2007), farmer organization (Bajoga, 2011), farmer associations (Williams, 1996), farmers clubs (Soderquist & Prastacos, 2007), cooperative society (Brain, 2014).

Community Resource Management:- is a process of ensuring sustainability of subjects and objects beneficial to the host environment. The resources here include land, minerals, talents, potentials, humans, animals. The process is tedious locally but it involves identifying, coordinating, sorting, grading packaging to minimize waste and encourage long-term usage.

Concept and Paradigms in Extension Education Research

Research is a scientific process of finding solution to identified problem. According to Bichi (2010) research is an art of scientific investigation aimed at finding a solution to identified problem. Similarly, Mory (1998) posit that research is a systematized effort to gain new knowledge. From above, research can simply be explained as a process of investigation from known to unknown, leading to new discoveries that provide solutions to problems. In another dimension, research culminates finding new ways of solving identified problems systematically (Babbie, 2013; Sambo, 2010; Creswell, 2008; Clifford, 1978). Research in extension education can be explained from the above context to mean a systematic process of inquiry aimed at finding solutions to identified problems, through defining the problem, formulating hypothesis, collecting relevant data, analyzing and interpreting the data, and drawing inference, which in the long run may lead to new discoveries.

The paradigms in extension education research are based on the positive nature of the events, causes and effects, criticisms and critical theory analysis. This phenomenon gives the researcher opportunity to use the available knowledge and make predictions about particular happenings and also make generalizations from such findings (Babbie, 2013; Sambo, 2010).

Extension Research Methods

Extension education researchers utilize different approaches of investigation to discuss issues in all areas of extension work and beyond. Researchers in extension depending on the method employed and the design adopted it can fall within the premise of being experimental, quasi-experimental or non-experimental. However, the end point is obtaining new knowledge and making new discoveries out of the systematic stages followed. It can also be described under the premise of specific methods used as qualitative, quantitative and mixed-methods.

Qualitative Methods in Extension: Qualitative research methods are basically useful towards obtaining an in-depth knowledge about subjects, objects or phenomenon. This approach uses the techniques that will bring-out the real situation on ground through critical observation and interviews (Bichi, 2010). Moreover, the analyses are conducted based on the ability of the researcher to understand the data collected and transformed through coding, transcriptions and use of specially designed software program. Moreover, in qualitative method of conducting research in extension use of groups is given a higher priority than individual, because it gives a holistic view of the society or community issue in focus (Shitu, 2012).

Quantitative Methods in Extension: Quantitative research approaches in extension are employed for numerous reasons among them include identifying the needs of the objects or subjects under study. Also, under quantitative approaches already existing programs can be evaluated to ascertain the worth of action and recommends areas that require improvement or modifications. Moreover, in the context of quantitative research different designs were employed to ensure genuine and reliable findings, among which survey is very common especially for developmental purposes (Shitu, 2012; Bichi, 2010).

Mixed Methods in Extension Research: Mixed methods as the name implies, refers to joining the two approaches together to find a solution to a common problem in one study. Using qualitative and quantitative approaches in one study was found to be increasing the power of each method (Williams, 1996). In models development for example, data could be collected at the initial development stages quantitatively, after the model is tested, in finding out its effectiveness for the sake of answering questions 'why' then qualitative methods must be employed.

In addition, extension work that is holistic in nature, meaning it deals with all resources (human and material), hence, it utilizes all the methods of research to solve the ever occurring challenges, depending on time and need. Holistic development in extension is enormous; as such it has very pertinent to have a multidimensional collaboration among the various disciplines that utilizes different techniques and approaches to reach a conclusion on a particular phenomenon (Sambo, 2010).

Participatory Action Research in Extension: This type of research allows both the researchers to work hand in hand towards solving the identified community problem. It is qualitative in nature that seeks in depth search of facts and figures that will foster sustainable development. In this form of research repeatedly the processes are systematically conducted to ensure certainty of the process and proper evaluation of the methods. The leading researcher provides intense knowledge and guidance to ensure that the sequence is followed without breakage and distortion. Moreover, in this kind of research the chain of continuity is determined by the and highly influence by the previous activity (O'Brien, 2001). Bichi (2010) observed that the core of any action research provides simpler ways of understanding how a community member action and in action assist in sustainable community development and facilitates the activities of extension workers and their supervisors.

Moreover, participatory action research specifically aimed at ensuring that positive changes holistically were effected in all the strata of human and community spheres. It allows all members of the community participate thoroughly to modify some practical aspects and theoretical provisions to suit the emerging changes that manifest year in year out. In addition, it creates room for promoting rational thinkers in the community which in the long run empower the community members overcome injustices and promote mutual cohesion with

the extension workers. Participatory action research facilitate social and psychological empowerment among the participants, the extension educators in the community form groups that are heterogeneous and this characteristic are being shared among the members consciously and unconsciously.

It also allows for positive inclusion of personal values analyses of the identified community problem which could be related to health, agriculture, and other socio-economic requirements. Participation level of community members in any action research increases their chances of learning from each other and leads to the community members' empowerment towards solving their problems sometimes under the supervision of the extension worker. One the major disadvantage of participatory action research is it requires a long time, commitment and expertise.

Community-Based Research: With the introduction of Community Driven Development (CDD) by World Bank recently has given the extension educators clear opportunity of directly involving the community in all facets of community life. This approach was found to be very effective in solving community problems by easily and also create collaboration between the known and the unknown, equality between community members, organizations and researchers in all aspects of the research process. This process expands the understanding projects that benefit the whole community without biasness. In community-based research, informal groups like mosques, churches and other self-help groups provide inputs in all the processes of the research. Moreover, this form of research uses all the resources of the community to understand the community problems and use the local resources to provide possible solution.

Extension educators in using this kind of research involve all the community groups and other components to improve the socio-economic status of the community and also coordinate the linkages between all the stakeholders towards ensuring sustainable development. In this kind of research, the educators create balance between community demand and supply, needs and aspirations, individual and group towards understanding research process, benefits of the research by the community members and simpler ways of obtaining research results that are qualitative and reliable. Community based research allows member of the community in groups to embark on voluntary projects evaluation, this process of involvement increases the quality of the groups and it will give them ample opportunity towards improving quality of the community. The group members have high sense of responsibility of ensuring the knowledge, skills and attitudes of research is put towards collective effort which in the long run shape the community as a whole.

Priority Fields for Extension Education Research

Worldwide view in extension education research is focused in five trends and paradigms which include: processes of technology transfer and adoption, linkage of findings towards globalization, reducing the rural urban drift that leads to high socio-economic development, proper utilization of democratic principles and its spread and the trend of information and communication technology. These trends promises high output as a result of extension worker intervention. Moreover, as a trained personnel in disseminating information using basic and simpler technology, he serves as a mediator who ensure proper and holistic growth of the community taking into consideration their culture, norms, values, needs and aspirations, which in the long run specifically enhances individual capacity through gaining high purchasing power, women home management skills, high cohesion among the community groups and fostering unity as a result of community self-help and volunteerism knowledge acquired. However, the contextual trends and priority fields in extension education research are discussed below with particular reference to Nigeria that suffers long term neglect in extension work as a result of political instability, infrastructural decay, poor orientation and total concentration on oil revenue (Sani, 2013).

Technology Transfer and Adoption: Traditional extension work started with transfer of technology to reduce drudgery and increases output from the farms. This has helped in creating more opportunities and provides many infrastructures such as roads, electricity and others that facilitate technology transfer to the most rural communities where the farmers are predominantly located. Moreover, this component provides the basis of all other extension areas, that is why recommendations were given by several scholars towards boosting this aspect and exposes the needs towards understanding what is required by the community for easy accepting changes. In addition, findings shows that rural dwellers pay more attention to their farms and animals, therefore all innovations that are contrary to the development of these two, they become skeptical towards acceptance and usage.

Furthermore, researches in this area are at the forefront and the researchers' uses multi-level analysis to arrive at a conclusion or draw inferences. The researchers also consider the farmer as a whole not a unit, that is to say, individual being of the farmer, family and his community is considered in any given circumstance to study. Bisi, Akande and Biola (2010) observed that, extension and community research conducted not on the basis on the needs and aspirations of the farmer is bound to produce invalid results because the farmers may tend not to respond sincerely. It is therefore recommended that researchers at this level have to decide to make their study robust in such a way that they allow the farmers give their best towards arriving at a concrete conclusions and the scholars should ensure that needs and aspirations of the farmers and other rural dwellers within the

community is directly and extensively captured, so that it can be used in the future for planning other programs. **Ecological Multilevel Community Analysis:** The most valuable and abundant resource in extension work is directly associated with land and sometimes cheap labour available in the rural community. This has mandated scholars in channeling extension researches towards ensuring sustainable development of the resources, as a result extension researchers study social climate in relation to social being of the rural farmer. Moreover, the studies on social environment and social behavior of the community members are given multi-dimensional critical analysis to ensure that both the micro and macro components of the farmer, his organization and the community at large are captured towards holistic development.

In addition, emphasis in this area in extension research is on the personal being in relation to the environment, for example studying relationships between social being, perceived social support and technology adoption. From the above, multi-level analysis covering the micro and the macro can be noted, at the micro system level analysis, the research group or individual researcher is at the liberty to undertake relationship between variables, discriminant factors study, differences between subjects or objects and effectiveness of certain formations or intervention. Also, since all the variables under study are embedded into the social environment, automatically the results from the study will reflect the ecological aspects. Moreover, this level of analysis takes into consideration influences of lower levels and higher levels since they are embedded in each other, for example the researcher can deduce that individual social problems are caused by the environment.

Social problems: One of the ultimate goals of extension education is influencing decisions of the participants both at individual level and at community level, these processes are faced with numerous social issues that arises as a results of conflict with the culture, norms and values of the society. Moreover, individual differences is another factor that raises a lot of social issues in within the group that the extension work is undertaken, as such the researches came up with specific program component that addresses such social issues like drug abuse, child molestation, HIV/AIDs, women empowerment, vulnerability, self-help and many more to ensure that they have a basis that will allow for total integration towards poverty reduction. The nature of researches in this context focuses on individual household needs, family issues such as marriage, family planning, shared responsibilities, religion, gender and vocation. In most cases the researchers investigate the remote causes of the social issue at hand through incorporating environmental social variables to draw inference and make possible recommendations.

Rural Community and Quality of Life: Another area that researchers in extension pay attention to is the effectiveness of resources available within the community towards influencing the individual and collective life of members. This form of research also engages studying the community compositions that leads to sustainable development. Moreover, the community where the extension worker perform his primary assignment possesses different kind of groups that are naturally formed as result of culture norms and values, such as religious groups, community based organizations and other self-groups both local and international, as such the researchers also evaluate their activities in relation to fostering unity and ensuring holistic development. In addition, extension has great concerns on how the community is set up, factors such as cohesion, participation, partnership, felicitation, appreciation, involvement, goals, age, gender, educational level have great influence on community members ability to attain self-esteem and self-actualization and has direct impact on community life (Zimmerman & Warchausky, 1998). Therefore, international donor agencies like FAO and IFAD invest greatly to ensure that rural communities capacity are enhanced in terms of providing, maintaining and evaluating all infrastructure and logistics, which in the long run reduces urban congestion (Bichi, 2010).

Sense of Rural Community: Extension work is mostly located in semi-urban and rural communities of the society where it is needed more due to absence of amenities and presence of resources to be developed. Psychological need of the communities is given priority to help in understanding of the basic requirement and make predictions based on the need assessment to avoid waste of resources (time and space). Bichi (2010) opined that, it refers to the degree at which the smaller units of the community are directly connected to the larger components and the relationship between them. However, sense of rural community is shaped by the faith based groups that are not in conflict with the culture of the community. Shitu (2012) suggested four dimensions towards understanding sense of rural community thus: participation, encouragement, incorporation and integration, and self-dependence and joint responsive linkages.

Collective Action and Rural Community Dynamism: Researches in this context focuses directly into changes required to ensure sustainable rural community development economically, politically, socially, intellectually and psychologically. In this context marginalized groups resources are harnessed and efficiently utilized towards given them a voice and raising their consciousness on the potentialities they possess. This type of research involves extensive community education facets, mobilization techniques, involvement strategies and participation methods. Moreover, it is an effort to bring closer all the societal components together for proactive action to ensure change is effected for the majority of the community members' mostly low-income earners. This type of research is very difficult and time consuming, because it incorporates combining both the quantitative and qualitative methods to arrive at a reasonable findings, it is more of social mobilization and liberation from

the oppressors' towards ensuring equality, justice and fairness. In addition, this kind of research was found to be sabotaged by those in positions because they perceived it as a threat to their leadership styles.

Furthermore, in this approach the extension researches incorporates and recruit volunteers that will undertake the grassroots mobilization, organizing, implementing, monitoring and evaluating actions in their domain and also report to the central body for critical observation and re-alignment. Moral and financial support services are initiated by the volunteer representatives or together with donor agencies that provides enabling environment for liberating the community. In some cases the changes required are not directly related to action, but policy formulation, in this case the researcher coordinate political assembly that will influence actualization of the required need without violating the culture and established rules of engagement.

Trends and Challenges in Extension Education Research

Trends

Extension education research and practice, has undergone many changes as a result of research findings from all angles internally and externally, which leads to lot of modifications of theories and enhancing the scope of others. Moreover, the context of research in extension being so broad, has given other related or sister disciplines uses conventional acceptable techniques to find solutions into common social community issues. Information and communication technology and other biosciences fields have offered simpler approaches towards solving rural community problems (Junaid, 2013; Bichi, 2010). FAO, WFP and IFAD (2012) noted that, extension education activities are higher in agriculture until recently when extension manifested in all components of social and economic life of rural development through the intervention of international donor agencies, thus including agriculture, health, consumer, industry, marketing and cooperatives (Junaid, 2013).

Extension education research are mainly embedded in the context of holistic rural development, as such it is predominantly participatory in nature. The approach engages the members of the community through CDD from initiation until completion of the study; it develops confidence in the rural participants and takes charge in some instances. Moreover, it has additional advantage of preserving the culture of the people and international donor agencies prepare this approach, because it has multiple comparative advantage of providing employment, creating awareness, inculcating positive change and promoting environmental friendliness (CSDP, 2013; GSADP, 2014).

In addition, participatory approaches break communication barriers and give the rural community members additional skills in terms of needs assessment, appraisals, monitoring and evaluation of all development projects. This trend of solving community problems through collective participation and action was found to reduce cost and leads to multiplier effect on the community members (Bichi, 2010), it was also found to increasing transparency and quality of leadership as a result of expert advice and intervention in resolving conflicts (Dukku, 2011). According Anderson, (2009) suggested researchers in extension and community development to adopt the PRA in CDD approach as basic tools for holistic community development, he continued, it takes care of gender balance, no age barrier and equity, fairness and justice are part of the major principles of operation. Both homogeneous and heterogeneous communities can use the PRA approach in solving its pressing issues, based on the fact that it is informal, practically oriented and multigenerational.

Furthermore, the emerging trends in agricultural reforms that include hydroponic and indoor cultivation of crops, production of genetically modified crops and animals shows a remarkable progress and build confidence that food security can be achieved towards sustainable development. Although, this technology is still new and available in only in developed countries, it has started gaining wider coverage and it is found to improve quality of life of the community members. Moreover, agricultural reforms has also started going beyond increase in quantity only, but rather holistically addresses issues in quality, profit margin (Abu-Mus'ab, 2013), farmer-driven development and diversification. This trend also takes care of the holistic rural development since it is embedded in provision of requisite infrastructure required for facilitation of rapid technology adoption and usage. In Nigeria today, the trends involves re-invigorating youth to take up agriculture as a foundational work to increase the quantity of qualitative food on the tables of households, this is supported by the government policies and partnership with other stakeholders towards attainment of the objectives, it also has a component called 'catch them young', which means inculcating like and love of agriculture from the grassroots by emphasizing it in primary and secondary schools curriculum.

Furthermore, another very crucial trend in extension research in Nigeria is the level of volunteerism spirit. The number of individual volunteers and Self-help groups (SHGs) that harness resources and use them judiciously for community development today is very low despite rapid increase in population in most of the rural areas, many youth participate in community development activities for reward and in the event they discover is not coming, they leave in some instances without prior notification. The principles of participating in community action for development based on needs, aspirations and partnership was reported to have reduce by about 46% in most developing countries (FAO, 2006), as such additional cost of operation is incurred by many development partners. Some self-help groups were reported not to pay the 10% counterpart funding required of

them to get a viable project, and this was concluded to cause by poor volunteerism spirit. (GSADP, 2014; CSDP, 2013)

The issue of Gender and Age cannot not be left out in discussing emerging trends in extension education especially in the developing countries, this issue is a serious challenge because of the way culture, tradition, norms and values created a wide vacuum between the elderly and the youth and in responding, taking decisions and participating in community issues no matter the level of education or status they have. The two groups are highly marginalized and only the elderly with traditional way of thinking take decision on their behalf, not minding the dynamism of the society and experience acquired due to cross cultural interactions.

Challenges

Researchers in extension education reported multiple challenges they are encountering in carrying out the work from the beginning to the end of each cycle. The challenges are categorized in different forms, ranging from those encountered on individual basis, group, community, society or those related to infrastructure or government policies. However, sincerity among researchers, validity and reliability of the results obtained, acceptability, government instability and poor continuity culture, low funding (non-availability of research grant), language barriers, diverse culture, norms and values (GSADP, 2014; CSDP, 2013) are the most common challenges affecting research work in extension.

Moreover, World Bank, FAO, & IFAD (2008).identify competency of the researchers in extension as a major challenge and impediment for achieving desired results. Training, manpower and infrastructure are also found to be among the front burner challenges in conducting research in extension and community services research (Bajoga, 2011). However, the challenges vary from place to place in Nigeria; it is noted to be very low in areas with high literacy level and high socioeconomic characteristics.

Conclusion

Research in Extension education generally leads to positive change through encouraging good decisions that substitute for example, the use of communal labor in farm clearing, construction of farmsteads, local roads, market stalls and town halls. The researchers use quantitative, qualitative and mixed approaches to ensure that the ultimate goals of extension work are met, and manifest in diverse trends. Moreover, in the process of conducting the research they encounter challenges which they suggest hinder their performance and affect research findings, the challenges includes poor funding, sincerity, poor policies as a result of government instability, acceptability, culture, and language barrier. Participatory action research and community based research embraces community driven strategies (CDD) were found to be encouraging community members to make good decisions on what they feel is better for their lives. This implies that the methods are very useful, relevant and can considerably increase the community effectiveness and sustainable development.

References

Abu-Mus'ab, S. Y. (2013). Increasing farmers' productivity through qualitative extension education: each-one take one approach. *Journal of Vocational education (JOVED)* 2(2)

Anderson, J., Hoar, T., Raeder, K., Liu, H., Nancy, C., Ryan, T. & Avellino, A. (2009). The Data Assimilation Research Testbed: A community Facility. *Journal of American Meteorological Society* Vol. 90, Issue 9. retrieved online from DOI:10.1175/2009BAMS2618.1

Anyanwu, J. C. (1998c). An Econometric Investigation of determinants of Foreign Direct Investment in Nigeria. A paper presented at the Nigerian Economic Society Annual conference held at Sheraton Hotel, Lagos. From 3rd-7th March, 1998.

Armstrong, D. G. (2006). HIV and Diabetics patients: a cross examination of aid groups. *The journal of community development*, 45(5).

Babbie, E. (2013) *The practice of Social research*. International Edition, WARDSWORTH CENGAGE Learning center, Asia.

Bashir, S. M (2014). Participation in microfinance scheme as a medium for empowerment among farmers community in Kano State, Nigeria. Unpublished Phd thesis.

Bajoga, M. A (2011). Critique on training modules of extension agents in GSADP. Discussion paper. May 2, 2011, Monthly Gombe State Ministry of Agriculture Bulleting.

Bichi, A. A (2010b). Issues and trends in community development and participation. *Trends in Education Research*. Zaria, ABU Press.

Bisi, Akande and Biola (2010). Skill Acquisition, Capacity Building and Women Economic Empowerment: A Case Study of Women Education Center, Ogun State. *Journal of Vocational education (JOVED)*, 3(2).

Brain R. (2014). Doing the Work of Extension: Three Approaches to Identify, Amplify, and Implement Outreach *Journal of Extension* 52 (2).

Clifford, M. H & Chi-Ling, T. (1988). Regression and Time series Model selection in small samples retrieved

online from www.biometrika.org/journals 76 (2) DOI: 10.1093/biomet/76.2.296.

Cohen, L. and Manion, L. (1994). *Research methods in education*, (4th ed) London; Rutledge.

Creswell, J.W (2003). Research design: Qualitative, quantitative and mixed methods approach. (2nd ed.) Thousand Oaks: Sage.

Community and Social Development Program (CSDP) (2013). Profile Study of Women Youth Self Help Groups in Gombe State. *Journal of Community Development*, 2(1).

Community and Social Development Program (CSDP) (2010). Formation of community groups guidelines. Workshop proceedings on local government desk officers, held at Zuma Royal Hotel, 6th- 9th March, 2010.

Dukku, M. G. (2011a). Extension Education in Nigeria: a panacea for rural development and poverty alleviation. *Journal of vocational education* (JOVED) 2 (4).

Food and Agricultural Organization (FAO) (2006). Issues and Opportunities for Agricultural Educational Training in the 1990s and Beyond. Rome: FAO.

Food and Agricultural Organization (FAO) (1994). *Issues and Opportunities for Agricultural Education and Training in the 1990s and Beyond*. Rome, FAO, Agricultural Education Group; Extension, Education and Communication Service (SDRE); Research, Extension and Training Division (SDR). Rome: FAO.

FAO, WFP and IFAD. (2012). *The State of Food Insecurity in the World 2012*. Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition. Rome, FAO.

GSADP (2014). Gombe state Agricultural Development Program, Newsletter of 23rd March, 2014.

Ibarra, H. and Hunter, M. (2007). How Leaders Create and Use Networks, *Harvard Business Review*, 85(1), 40-47.

IFAD, (2011). *Food security challenges in Africa*. A case for collaborative action to reduce the effect of poverty in the region, African discussion paper on food and economy, 2011 summit, Rome, FAO.

Josephine, A.O., Christiana, N.A., and Ganiyu, A. (2011). The Imperative of Self Help in Community Development for the Achievement of the Millennium Development Goals, *Journal of Education in Development Areas* (JEDA) 19(1), p 1-9.

Junaid, D. (2013). Relevance of qualitative methods of research in rural development. *Journal of Business Education*. 3(4).

Mory, G. C (1998). Rural Development Practice in Nigeria: Are we Truly Developing? *Jornal of Rural Development* 6 (3).

Ndaeji, M.N., Nobaya, a., Asnarulkhadi, A. S. (2013). Rural Women Empowerment through Self-help Groups in Nigeria: The Role of Participation and Volunteerism. *Life science Journal* 10(4) retrieved online from <http://www.lifesciencesite.com>.

O'Brien, M. A. (2001). Changing provider behavior: An Overview of Systemic Reviews of Interventions. *Journal of Medical care*. 39 (8) retrieved online from www.jstor.org/stable/3767642.

Osborne, S. (2000). *Public-Private Partnership*: Theory and practice in International perspective, New York: Routledge.

Sambo, A. A (2010). *Research methods in education*. Lagos. Sterling-Horden Publishers (Nig) Ltd.

Shitu, M. B (2012). The role of extension education in strengthening community empowerment programs in Nigeria. *Journal of Adult education*. 4(6).

Soderquist, K. E., Dimitris, B., Kostopoulos, K., and Prastacos, G. (2007). Knowledge effectiveness, social context and innovation. *Journal of Knowledge Management*. 11(5) Issue 5.

William, B. L. (1996). Research, Extension, and User Partnerships: Models for Collaboration and Strategies for Change. *Journal of Agriculture and Human Values*. 13(2).

World Bank, FAO, & IFAD (2008). *Gender in Agriculture Source Book*. Washington DC: The

Zimmerman, M., A and Warschausky, S. (1998). "Empowerment theory for rehabilitation research: conceptual and methodological issues", *Rehabilitation psychology*, 43(1), pp. 3-16.